Research & Reviews: Journal of Zoological Sciences

eISSN:2321-6190
pISSN:2347-2294

Locomotion of Animals in Different Media

Kristhiana Sorn*

Department of Animal Production and Technology, University of Veterinary Medicine, Vienna, Austria

Short Communication

Received: 05-Dec-2022 Manuscript No. JZS-22- 99005; **Editor assigned:** 11- Dec-2022, Pre QC No. JZS-22-99005 (PQ); **Reviewed:** 26- Dec -2022, QC No. JZS-22- 99005; **Revised**: 03- Jan -2022, Manuscript No. JZS-22- 99005 (R); **Published:** 10-Jan-2022, DOI: 10.4172/ 2321-6190.10.8.005.

***For Correspondence:**
Kristhiana Sorn, Department of Animal Production and Technology, University of Veterinary Medicine, Vienna, Austria
E-mail: Sorn@viu.at

DESCRIPTION

Animal locomotion, in ethology, is any of a variety of methods that animals use to move from one place to another. Some modes of locomotion are initially self-propelled, e.g., running, swimming, jumping, flying, hopping, soaring and gliding. There are also many animal species that depend on their environment for transportation, a type of mobility called passive locomotion, for example sailing (some jellyfish), kiting (spiders), rolling (some beetles and spiders) or riding other animals (phoresis).

Animals move for a variety of reasons, such as to find food, a mate, a suitable microhabitat, or to escape predators. For many animals, the ability to move is essential for survival and, as a result, natural selection has shaped the locomotion methods and mechanisms used by moving organisms. For example, migratory animals that travel vast distances (such as the Arctic tern) typically have a locomotion mechanism that costs very little energy per unit distance, whereas non-migratory animals that must frequently move quickly to escape predators are likely to have energetically costly, but very fast, locomotion..

The anatomical structures that animals use for movement, including cilia, legs, wings, arms, fins, or tails are sometimes referred to as locomotory organs or locomotory structures. Benthic locomotion is movement by animals that live on, in, or near the bottom of aquatic environments. In the sea, many animals walk over the seabed. Echinoderms primarily use their tube feet to move about. The tube feet typically have a tip shaped like a suction pad that can create a vacuum through contraction of muscles. This, along with some stickiness from the secretion of mucus, provides adhesion. Waves of tube feet contractions and relaxations move along the adherent surface and the animal moves slowly along. Some sea urchins also use their spines for benthic locomotion.

Crabs typically walk sideways (a behaviour that gives us the word crabwise). This is because of the articulation of the legs, which makes a sidelong gait more efficient. However, some crabs walk forwards or backwards, including raninids, Libinia emarginata and Mictyris platycheles. Some crabs, notably the Portunidae and Matutidae, are also capable of swimming, the Portunidae especially so as their last pair of walking legs are flattened into swimming paddles.

Gravity is the primary obstacle to flight. Because it is impossible for any organism to have a density as low as that of air, flying animals must generate enough lift to ascend and remain airborne. One way to achieve this is with wings, which when moved through the air generate an upward lift force on the animal's body. Flying animals must be very light to achieve flight, the largest living flying animals being birds of around 20 kilograms.

Other structural adaptations of flying animals include reduced and redistributed body weight, fusiform shape and powerful flight muscles there may also be physiological adaptations. Active flight has independently evolved at least four times, in the insects, pterosaurs, birds, and bats. Insects were the first taxon to evolve flight, approximately 400 million years ago (mya), followed by pterosaurs approximately 220 mya, birds approximately 160 mya, then bats about 60mya. A stomatopod, Nannosquilla decemspinosa, can escape by rolling itself into a self-propelled wheel and somersault backwards at a speed of 72 rpm. They can travel more than 2 m using this unusual method of locomotion.

REFERENCES

1. Johnson WE. Endogenous retroviruses in the genomics era. Annu Rev Virol, 2015; 2:135-59.
2. Greenwood AD, et al. Transmission, Evolution, and Endogenization: Lessons Learned from Recent Retroviral Invasions. Microbiol Mol Biol Rev. 2018; 82:22-26.
3. Farkašová H, et al. Discovery of an endogenous Deltaretrovirus in the genome of long-fingered bats (Chiroptera: Miniopteridae). Proc Natl Acad Sci.2017; 114:3145–3150.
4. Johnson M, et al. NCBI BLAST: A better web interface. Nucleic Acids Res. 2008; 36:35-39.
5. Serrao E, et al. Key determinants of target DNA recognition by retroviral intasomes. Retrovirology. 2015; 12:39.